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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,019	07/30/2001	Ramin Moshiri-Tafreshi	4740-017	1042

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EXAMINER	
KADING, JOSHUA A	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/918,019	MOSHIRI-TAFRESHI ET AL.	
	Examiner	Art Unit	
	Joshua Kading	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-46* is/are rejected.

7)☒ Claim(s) *31 and 32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/01, 12/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 32 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 32 recites verbatim what is disclosed in its parent claim 14.

2. Claim 31 is objected to because of the following informalities:

Claim 31, line 2, "an air interface" should be changed to --the air interface-- to avoid confusion.

Claim 31, line 5, "a backhaul capacity...a percentage" should be changed to --the backhaul capacity...the percentage-- to avoid confusion.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 8-11, 15-21, 26-29, 34-36, 39-42, and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,686,671, Burian et al. (Burian).

Regarding claims 1, 16, and 34, Burian discloses, "a wireless communication system comprising:

a first radio base station operable to transmit communication signals to mobile units within the wireless communication system and to receive communication signals from the mobile units (*figure 1, an FS and the MS represent the base station and mobile unit where there can be more than one mobile unit as described in col. 3, lines 18-19*);

a plurality of radio base stations operable to transmit communication signals to mobile units within the wireless communication system and to receive communication signals from the mobile units, wherein said plurality of radio base stations are linearly coupled (*figure 1, all FS and MS*); and

a base station controller operable to transmit communication signals between the first radio base station and said plurality of radio base stations and an external communication system (*figure 1, the LS acts as base station controller as read in col. 1, lines 67-68*), wherein the base station controller is coupled to the first radio base station to establish a first communication channel and to a second radio base station of said plurality of radio base stations to establish a second communication channel, and further wherein the first radio base station is coupled to a third radio base station of said plurality of radio base stations (*figure 1 where as seen, the base stations are configured in such a manner as described by the claim*)."

Regarding claims 2, 17, and 35, Burian discloses, "wherein at least one of said plurality of radio base stations is coupled to and between the first and second radio base stations (*figure 1, where the FS's are connected through the LS's*)."

Regarding claims, 3, 21, and 36, Burian discloses, "wherein the base station controller is coupled to the first and second radio base stations via a wired or wireless communication network (*figure 1 as read in col. 1, lines 46-50*)."

Regarding claims 8, 26, and 39, Burian discloses, "wherein the base station controller uses the second communication channel to receive communication signals from the second and third radio base stations and to transmit communication signals received from the external communication system to the second and third radio base stations (*col. 2, lines 36-45*)."

Regarding claims 9, 27, and 40, Burian discloses, "wherein the base station controller uses the first communication channel to receive communication signals from the second and third radio base stations and to transmit communication signals received from the external communication system to the second and third radio base stations when the base station controller detects that there is a failure associated with the second communication channel (*col. 2, lines 54-65*)."

Regarding claims 10, 28, and 41, Burian discloses, "wherein the base station controller uses the first communication channel to receive communication signals from the first radio base station and to transmit communication signals received from the external communication system to the first radio base station (*col. 2, lines 36-45*)."

Regarding claims 11, 29, and 42, Burian discloses, "wherein the base station controller uses the first communication channel to receive communication signals from the second and third radio base stations and transmits communication signals received from the external communication system to the second and third radio base stations when the base station controller detects that there is a failure associated with the second communication channel (*col. 2, lines 54-65*)."

Regarding claims 15 and 46, Burian discloses, "wherein communication signals include voice signals, data signals or voice and data signals (*figure 1, where the mobile transmits and receives voice data signals*)."

Regarding claim 18, Burian discloses, "at least one radio base station coupled to and between the first and third radio base stations (*figure 1, where the FS's are connected through the LS's*)."

Regarding claim 19, Burian discloses, "at least one radio base station coupled to and between the second and third radio base stations (*figure 1, where the FS's are connected through the LS's*)."

Regarding claim 20, Burian discloses, "wherein the second radio base station and the third radio base station are the same radio base station (*figure 1, where any of the FS's can act as a first, third, or both base station*)."

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 4-7, 22-25, 37, and 38 rejected under 35 U.S.C. 103(a) as being unpatentable over Burian et al. in view of U.S. Patent 6,243,367 B1, Hussain.

Regarding claims 4, 22, and 37, Burian lacks what Hussain discloses, "wherein the wired communication network is a SONET (*col. 5, lines 65-col. 1, line 1*)." It would have been obvious to one of ordinary skill in the art at the time of invention to include the SONET network for the purpose of transmitting high capacity data. The motivation is to have higher throughput.

Regarding claims 5 and 23, Hussain lacks what Burian discloses, "at least one bi-directional ring (*figure 1 shows that the entire system of FS's and LS's creates a bi-directional ring*)." It would have been obvious to one of ordinary skill in the art at the time of invention to include the bi-directional ring for the same reasons and motivation as in claims 4 and 22.

Regarding claims 6 and 24, Hussain lacks what Burian discloses, "wherein said at least one bi-directional ring includes a plurality of bi-directional rings that are interconnected (*figure 1, each LS has connected FS's that create individual bi-directional rings*)." It would have been obvious to one of ordinary skill in the art at the time of invention to include the bi-directional rings for the same reasons and motivation as in claims 5 and 23.

Regarding claims 7, 25, and 38, Burian lacks what Hussain discloses, "a mobile switching center coupled to the base station controller, said mobile switching being operable to transmit communication signals between the external communication system and the base station controller (*figure 2, element 204 as disclosed in col. 6, lines 4-6*)." It would have been obvious to one of ordinary skill in the art at the time of invention to include the MSC for the purpose of providing connections between the base station controllers and other networks. The motivation for this is that the mobile stations of the wireless network can connect and communicate with users in other networks, such as a PSTN.

5. Claims 12-14, 30-33, and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burian et al. in view of U.S. Patent 5,557,603, Barlett et al., (Barlett).

Regarding claims 12, 13, 30, 31, 43, and 44, Burian discloses, "wherein the first, second and third radio base stations have an air interface capacity to support wireless communications between the mobile units and the first, second and third radio base stations (*figure 1 where the mobile station communicates with the base stations through an air interface*)." However, Burian lacks what Barlett discloses, "wherein each of the first, second and third radio base stations has a backhaul capacity to support a percentage of the air interface capacity (*col. 3, lines 63-col. 4, lines 1-6 where the spare channel as a backhaul capacity of the air interface*)." It would have been obvious to one of ordinary skill in the art at the time of invention to include the backhaul capacity for the purpose of using the spare channel for diversity purposes. The motivation for this is that this added diversity allows the system to, for example, support additional users, have a fail safe measure in case of failure, etc.

Regarding claims 14 (and thus claim 32 since it is identical) and 45, Burian lacks what Barlett discloses, "wherein the percentage is between 30% and 100% (*col. 3, lines 64-65*)." It would have been obvious to one of ordinary skill in the art at the time of invention to include the percentage range of between 30% and 100% for the same reasons and motivation as in claims 13 and 44.

Regarding claim 33, Barlett lacks what Burian discloses, "wherein communication signals include voice signals, data signals or voice and data signals (*figure 1, where the mobile transmits and receives voice data signals*)." It would have been obvious to one of ordinary skill in the art at the time of invention to include the voice data signals for the same reasons and motivation as in claim 14.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-3070. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joshua Kading
Examiner
Art Unit 2661

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SUPERVISORY PATENT EXAMINER
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June 13, 2005